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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/961,956	10/31/97	ROYO	J B-3379-61628

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EXAMINER

PASTERCZYK, J

ART UNIT	PAPER NUMBER
1755	13

DATE MAILED: 08/12/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/961,956

Applicant(s)
Royo et al.

Examiner
J. Pasterczyk

Group Art Unit
1755



☒ Responsive to communication(s) filed on Jul 2, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-7, 9-12, 14, and 20-26 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-7, 9-12, 14, and 20-26 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Oct 31, 1997 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 6, 12

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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1. This Office action is in response to the amendment and election of species as well as response to the restriction requirement, the first response being filed with the Office 7/2/99 in conjunction with an IDS.

2. Applicant's election with traverse of the catalyst containing a group 4 metal plus aluminum cocatalyst claims in Paper No. 11 is acknowledged. The traversal is on the ground(s) that it would be a burden on the applicants to file numerous applications on the nonelected claims. This is not found persuasive because this is not a proper reason for traversal of a restriction requirement.

The requirement is still deemed proper and is therefore made FINAL.

3. The drawings are objected to because they are generally only difficultly legible as noted on the P-948 form. It is suggested that each figure be blown up and given its own sheet so that the letters and numbers will be legible, consistent with the draftsman's objections on the previously-supplied PTO-948 form. Correction is required. ✓

4. The disclosure is objected to because of the following informalities: the specification is in general faded and spotty. A clean copy is requested for the benefit of both the examiner and the printers should this case go to issue. Also, Cp is the general term for a cyclopentadienyl group, rather than L and its superscripted variations, which is normally used to refer to neutral Lewis bases. ✓

Appropriate correction is required.

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5. The following guidelines illustrate the preferred layout and content for patent applications. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

The following order or arrangement is preferred in framing the specification and, except for the reference to "Microfiche Appendix" and the drawings, each of the lettered items should appear in upper case, without underlining or bold type, as section headings. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) Title of the Invention.
- (b) Cross-References to Related Applications.
- (c) Statement Regarding Federally Sponsored Research or Development.
- (d) Reference to a "Microfiche Appendix" (see 37 CFR 1.96).
- (e) Background of the Invention.
 - 1. Field of the Invention.
 - 2. Description of the Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) Brief Summary of the Invention.
- (g) Brief Description of the Several Views of the Drawing(s).
- (h) Detailed Description of the Invention.
- (i) Claim or Claims (commencing on a separate sheet).
- (j) Abstract of the Disclosure (commencing on a separate sheet).
- (k) Drawings.
- (l) Sequence Listing (see 37 CFR 1.821-1.825).

Although p. 8 includes descriptions of the contents of the figures, there is no appropriate heading for this section. ✓

6. The abstract of the disclosure is objected to because it should emphasize more the purported invention, i.e. the presence of at least one siloxy group on the R groups. It is also blurry so that it is unclear how many apostrophes there are as the various superscripts. A new, clear abstract is requested. Correction is required. See MPEP § 608.01(b). ✓

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7. Claims 1-7, 9-12, 14 and 19-26 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The use of a support which is reactive with trialkylsiloxy groups is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Page 2, l. 15-18 of the specification discloses that the siloxy groups on the R groups of the present formulas I and II react with surface reactive groups on the support material, the reactive groups being explicitly shown in figure IV to be bridging oxygen groups between two silicon atoms of a silica surface. ✓

8. Claims 1-7, 10-12, 14, and 19-22 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the support being silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof, does not reasonably provide enablement for the support being e.g. magnesium chloride or any other halide of magnesium which is typically used as a support for metallocene catalysts, or a zeolite which is similarly used. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The key to the invention is the reactivity of the siloxy groups on the R groups of formulas I and II with particular surface groups on the support. However, only a small number of supports are disclosed as being capable of reacting with this siloxy group; the other counterexamples recited above are also porous inorganic solids, yet there is no disclosure that they may be used as the support materials for the present metallocenes of formulas I or II. ✗ ✓

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9. Claims 1-7, 9-12, 14 and 19-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). The terms "L", "L₁", and "L₂" in the claims are used by the claims to mean "cyclopentadienyl group containing ligand," while the accepted meaning is "neutral Lewis base." ✓

In claim 1, top line of p. 3 of the amendment, "united" is normally termed --bonded--. In text line 13 of the second page of the amendment and the 6th line from the end of the claim, change "or" to --and-- for proper Markush terminology.

In claim 2, l. 4, 7 and 12, change "or" to --and-- for proper Markush terminology. On l. 15, change "heteroatoms" to the singular to conform to the rest of the clause. The whole recitation of l. 10-14 is prolix and redundant with what is already recited in claim 1, thus failing to further limit it.

In the last lines of claims 6 and 7, R' is undefined since these claims depend from claim 1 instead of claim 2 where this variable is defined.

Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See

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MPEP § 2172.01. The omitted steps are: the addition of a cocatalyst, which is recited as being in the composition in l. 5 of claim 1.

Further in claim 10, the fifth line from the end has two instances of “on”, and in the third line from the end it is not clear what is being filtered and washed.

In claim 14, insert --an-- before “alkylalumoxane” since the latter is not a specie.

Claim 20 provides for the use of the use of the catalyst of claim 1, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced. In this claim, the recitation “is for” is considered to be identical to “[U]se of” language. If this claim were properly couched in process terms, it would fall within the nonelected claims to method of polymerization using the claimed catalyst.

Claim 20 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-7, 9, 14 and 20-26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over any of Vega et al., USP 5,824,620 (hereafter referred to as Vega), Gila et al., USP 5,861,352 (hereafter referred to as Gila I), and EPO 0 293 815 (hereafter referred to as Antberg).

Each of these references discloses a supported metallocene catalyst in combination with a cocatalyst in which the reaction of the presently-claimed I or II with the support would have formed the prior art supported catalyst; see Vega, col. 4, l. 1-8, l. 15-57; col. 5, l. 1-44. Note Gila I, col. 3, l. 62 to col. 4, l. 32; col. 4, l. 63 to col. 5, l. 11; col. 6, l. 18-50. See also Antberg, pp. 2 and 7. When the present claims are read as product-by-process claims with the process being the combination of the metallocene with the support, the product appears to be anticipated by each of these references.

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Since the prior art appears to disclose and teach the invention as claimed on the basis of inherent property characteristics which either anticipate or render obvious the claimed invention, an alternative 102/103 rejection is deemed appropriate, and the burden of proof that it does or does not shift to applicants as in *In re Fitzgerald*, 205 USPQ 594.

13. Claims 1-6, 9, 14 and 20-26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Patsidis et al., USP 5,466,766 (hereafter referred to as Patsidis).

Patsidis has a disclosure similar to those of the references used in paragraph 12 above (examples). When the present claims are read as product-by-process claims with the process being the combination of the metallocene with the support, the product appears to be anticipated by this reference.

Since the prior art appears to disclose and teach the invention as claimed on the basis of inherent property characteristics which either anticipate or render obvious the claimed invention, an alternative 102/103 rejection is deemed appropriate, and the burden of proof that it does or does not shift to applicants as in *In re Fitzgerald*, 205 USPQ 594.

14. Claims 1-7, 9, 14 and 20-26 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gila et al., USP 5,846,895 (hereafter referred to as Gila II).

Gila II has a disclosure similar to that of Gila I above (col. 4, l. 1 to col. 5, l. 18; col. 6, l. 18-34; col. 6, l. 53 to col. 7, l. 30; examples). When the present claims are read as product-by-

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process claims with the process being the combination of the metallocene with the support, the product appears to be anticipated by this reference.

Since the prior art appears to disclose and teach the invention as claimed on the basis of inherent property characteristics which either anticipate or render obvious the claimed invention, an alternative 102/103 rejection is deemed appropriate, and the burden of proof that it does or does not shift to applicants as in *In re Fitzgerald*, 205 USPQ 594.

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The other prior art is either a related foreign document to the US patent, or merely teaches generically bonding metallocenes to supports.

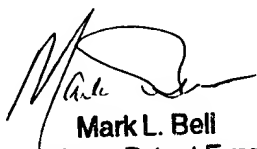
16. Claims 10-12 and 19 would be allowable if rewritten in independent form including all the limitations of the intervening claims, as well as to overcome the formal rejections made against them.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is (703) 308-3497. Our fax number is 305-5433.



J. Pasterczyk

August 9, 1999



Mark L. Bell
Supervisory Patent Examiner
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